DOCUMENT RESUME

ED 325 147 JC 900 508

AUTHOR Falcone, Andrew J.
TITLE Project Pathways: A Longitudinal Investigation of Academic Persistence. Interim Report.
INSTITUTION Metropolitan Community Colleges of Kansas City, Mo.
PUB DATE Sep 90
NOTE 23p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Persistence; Black Students; Community Colleges; Dropout Research; *Dropouts; Enrollment Trends; Longitudinal Studies; School Holding Power; *Stopouts; Student Attrition; *Student Characteristics; Student Educational Objectives; Terminal Students; Two Year Colleges; *Two Year College Students

ABSTRACT

A longitudinal study was conducted of enrollment patterns and student persistence at the Metropolitan Community Colleges of Kansas City, Missouri. The entire fall 1987 first-time freshman population of 2,994 students was followed from entry through spring 1989 to identify patterns in the enrollment and characteristics of persisters, dropouts, and stopouts. Major findings of the study were as follows: (1) only 4.7% of the fall 1987 freshman population received a certificate or degree in the 2-year period; (2) 27.7% of the group were continuously enrolled for all four terms, and, of these students, 15.3% received a certificate or degree; (3) 8.6% were enrolled for three consecutive semesters, and 23% were enrolled for two consecutive semesters; (4) 9.9% stopped out for one or more semesters and subsequently reenrolled; (5) black students represented 12.2% of the freshman group as a whole, but only 9.2% of the continuously enrolled students; (6) females, who represented nearly 58% of the fall 1987 freshmen, were overrepresented in first-semester dropouts and groups with disrupted enrollment patterns; (7) students who were continuously enrolled had the highest grade point averages (GPA's) and completed twice as many credit hours as any other group; and (8) the intention to take only selected courses was related to enrollment for fewer semesters and lower GPA's. (GFW) (JMC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED325147

instructional ■ services

PROJECT PATHWAYS

A LONGITUDINAL INVESTIGATION OF ACADEMIC PERSISTENCE

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

A. J. Falcone

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)"

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Dr. Andrew J. Falcone
Metropolitan Community Colleges
of Kansas City, MO.

■ **INTERIM REPORT** ■

september, 1990

JC900508

Interim Report (September 1990)

Project Pathways

Project Pathways is a longitudinal study of enrollment patterns at the Metropolitan Community Colleges of Kansas City, Missouri. Please direct any questions regarding this ongoing investigation to:

Dr. Andrew J. Falcone
Research Associate
Office of Instructional Services
Metropolitan Community Colleges
3200 Broadway
Kansas City, MO 64111
(816) 756-0220, Ext. 329

SUMMARY
PROJECT PATHWAYS

Project Pathways was an extensive longitudinal investigation that sought to determine student characteristics and graduation rates of eight different groups of students. Each of these groups had a different enrollment history across a two year period beginning with the fall 1987 semester, in which they were first time freshmen. This brief summary is intended as an overview, and the reader is strongly encouraged to read the full report for a more complete understanding of this research.

	SEMESTERS			
GROUPS	FALL 1987	SPRING 1988	FALL 1988	SPRING 1989
1	H	H	H	H
2	H	H	H	X
3	H	H	X	H
4	H	H	X	X
5	H	X	H	H
6	H	X	H	X
7	H	X	X	H
8	H	X	X	X

H: Enrolled
X: Not Enrolled

1. Of the entire first time freshmen population from the fall 1987 semester, 4.7% received a certificate or degree in a two year period

2. Of those students that were continuously enrolled, (fall 1987, spring 1988, fall 1988, and spring 1989) 15.3% received a certificate or degree in a two year period.

3. Those students who were continuously enrolled, accounted for 27.7% of the fall 1987 population.

4. Those students who were enrolled for one semester (fall 1987) and did not re-enroll through the spring of 1989, accounted for 30.8% of the fall 1987 population.

5. Black students were at greater risk than white students for not completing continuous enrollment.

6. Females represented nearly 58% of the entire first time freshmen population, while they were overrepresented in the groups with the most disruptive enrollment patterns, (groups 5, 6, and 7) especially group 7. Females were also overrepresented in group 8, the group that enrolled for the first semester only.

7. The students who were continuously enrolled, possessed the highest GPA of any of the eight groups.

8. All seven of the groups with a disruptive enrollment pattern possessed lower GPA's than the continuously enrolled group.

9. The continuously enrolled group completed twice as many credit hours as any of the other seven groups.

10. As the student enrolled for more semesters, there was also an increase in the percentage of stated intentions (fall 1987) of completing the associate degree.

11. As the student enrolled for fewer semesters, there was an increase in the percentage of stated intentions of taking selected courses.

12. As the student enrolled for fewer semesters, there was an increase in the percentage of stated intentions of taking courses to improve job skills.

13. Students who stated that they intended to take selected courses were, on average, 2.5 years younger than those students who indicated that they intended to seek an associate degree.

14. Students who stated that they intended to take selected courses possessed a lower GPA than those students who indicated that they intended to seek an associate degree.

15. Among the black students, the percentage of those declaring their intentions of seeking an associate degree was less than those seeking selected courses.

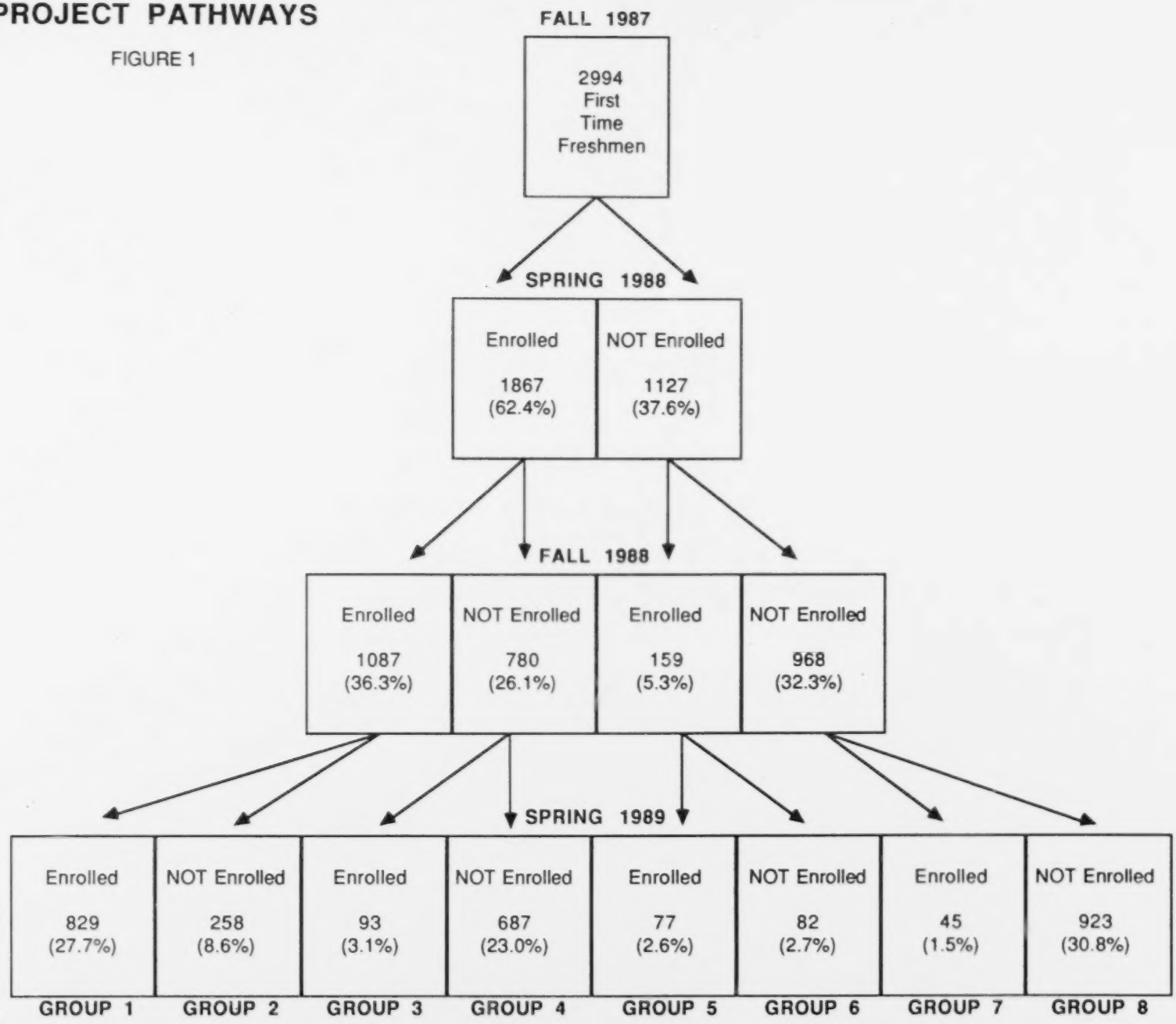
PROJECT PATHWAYS

This longitudinal investigation of academic persistence entitled Project Pathways, is a multi-group investigation intended to explore similarities and/or differences of various student groups at the completion of the traditional two year course of study required for the associate degree. Beginning with a data base of nearly 3000 first-time freshmen from the fall 1987 semester, this assemblage was subdivided into returning and nonreturning groups of the spring 1988 semester. These two groups were again subdivided into returning and nonreturning groups of the fall 1988 semester (see figure 1, page 2). These four groups that were identified in the fall of 1988 were again subdivided into eight terminal groups of the spring 1989 semester. These eight groups (4 returning and 4 nonreturning) each had a different history of academic persistence across the two year period. It was these eight groups that were examined.

Using this diagram, the retention history of any of the eight groups can be traced back to the fall 1987 semester. For example, the retention history of group 6 begins in the fall of 1987 and progresses to the spring 1988 semester, where these students did not return. The students of group 6 did return for the fall 1988 semester, and did not return for the spring 1989 semester.

PROJECT PATHWAYS

FIGURE 1



This study begins with the fall 1987 semester, and has as its end point, the spring 1989 semester. The data reported for each of the groups are the cumulative figures at the end of the spring 1989 semester. For example, the 687 students (23.0% of 2994) in group 4 had an average GPA of 2.4, and earned an average of 13.6 credit hours by the end of the spring 1989 semester.

The data presented in table 1 allows one to examine the inter-group differences as well as the characteristics of all students in the study. The "all groups combined" column represents the aggregation of all eight groups used in the analysis and provides for a comparison group for the various enrollment patterns of these eight subgroups.

Fall 1987 through Spring 1989

TABLE 1 General Characteristics of Subgroups

Characteristics	All Groups Combined (2,994)	1 H,H,H,H (829)	2 H,H,H,X (258)	3 H,H,X,H (93)	4 H,H,X,X (687)	5 H,X,H,H (77)	6 H,X,H,X (82)	7 H,X,X,H (45)	8 H,X,X,X (923)
Percentage in Groups	100.0%	27.7%	8.6%	3.1%	23.0%	2.6%	2.7%	1.5%	30.8%
Female	57.6%	53.6%	50.8%	57.0%	56.6%	59.7%	67.1%	62.2%	62.7%
Average Age[a]	28.2	25.8	26.5	26.0	28.1	25.9	27.9	26.5	31.5
White	84.0%	87.1%	85.7%	73.1%	80.8%	80.5%	82.9%	84.4%	84.7%
Black	12.2%	9.2%	10.5%	21.5%	15.3%	13.0%	15.9%	15.6%	11.7%
Hispanic	1.3%	1.4%	1.2%	3.2%	.9%	2.6%	1.2%	0.0%	1.2%
Avg. Cr. Hr. Earned	18.9	40.8	20.9	17.0	13.6	20.2	7.2	8.0	4.1
Average GPA	2.4	2.7	2.3	2.3	2.4	2.4	2.0	2.2	2.2
ASSET (Percentage[b] Below Cutoff)									
WS	17.3%	12.8%	19.3%	17.2%	16.4%	12.0%	16.3%	11.1%	26.1%
RS	35.3%	30.0%	33.7%	25.0%	34.7%	27.5%	28.6%	14.8%	50.9%
NS	59.7%	51.9%	55.6%	44.9%	57.1%	47.5%	48.8%	32.0%	85.5%
Certificate/Degree Earned	4.5% (136)	(15.1%) (125)	1.6% (4)	1.1% (1)	.7% (5)	1.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)

[a] Average age in 1990.
[b] ASSET percentages based on a smaller sample.
Not all first time freshmen were required to take the test.

H = Enrolled, X = Not Enrolled

The two largest groups of this longitudinal investigation consisted of those students who were the most persistent (Group 1), and those that were the least persistent (Group 8) in their higher education pursuits. There were very few other similarities between these two groups.

Females were overrepresented in group 8, at 62.7% relative to the 57.6% in the entire population, whereas females represent a slightly lower percentage of students in group 1 at 53.6% when compared to the overall figure. Females were more likely to enroll for one semester and not return. Group 1 possessed the lowest average age of any of the groups in the study, whereas group 8 had the highest average age. In general, the data indicate that younger students were more likely to remain continuously enrolled.

Black students were not as likely to enroll for four continuous semesters as were white students. Black students represented only 9.2% of group 1, whereas there were 12.2% blacks in the entire population. Blacks were overrepresented in groups 3 through 7, and especially group 3 which includes those students that stop out for the third semester, and return for the fourth semester. Groups 3, 5, 6 and 7 contained 297 students that "stopped out" for at least one semester after previous enrollment, then returned for a later semester. The students of group 4 enrolled for two consecutive semesters then did not return. Black students tended to be present in these groups in larger proportions than the overall black student population. When comparing the number of all students in groups 3, 5, 6, and 7, it will be noticed that groups 3, 5, and 6 contain similar numbers of students, whereas group 7 deviates from this pattern with only 45 students. The longer the interval of non-enrollment, the less likely the student will return.

Group 1 earned the highest number of average credit hours, and surprisingly, the group 2 students who completed three continuous semesters averaged only 20.9 hours. The three groups that completed three semesters (groups 2, 3, and 5) earned approximately the same amount of credit hours regardless of their enrollment pattern.

The average GPA did not vary greatly among these groups either, at 2.3, 2.3, and 2.4 respectively. Although this disruption in academic progress is apparent in groups 3 and 5 as indicated by the low percentages in these groups, there were no apparent differences in average credit hours earned or in average GPA. When a student did not return for a given semester, the likelihood of returning at some later time was greatly reduced, even though the GPA was not adversely affected.

When a student falls below a given cut score on the ASSET placement exam, this is an indication that remediation is needed in that area. There does not appear to be very strong relationships between remediation needs and re-enrollment patterns (with the exception of group 8). This statement finds support when one compares the percentages for groups 1 through 6 on each of the subtests. Although group 7 had percentages that were the lowest of any of the groups, this was also the smallest group, with an N of 45. When a sample is small, it may not reflect the true characteristics of the larger population from which it was drawn, it may be an idiosyncratic subset. If the percentages of these 7 groups are critically examined, it can be seen that there were few discernible patterns that emerged. Whether the student enrolled in two, three, or four semesters, was not linked to large differences in the magnitudes of the percentages below the cut scores.

One finding that did emerge however, was that four of the groups with a disruptive enrollment pattern (3, 5, 6, 7) contained percentages of students below the cut scores that were less than the percentages for the students in the continuously enrolled group 1, and group 2, which contained students who enrolled for three continuous semesters. This occurred for at least two of the three subtests. When comparing groups 1 and 2 to groups 3, 5, 6, and 7, the relationship is such that the larger the percentage of students below the ASSET cut scores, the longer the student tended to enroll.

Group 8 contained the largest percentage of students that were below the ASSET cutoff scores on each of the subtests. For example 85.5% or 789 of the 923 students in this group, were below the cutoff score on the numerical skills subtest. Group 8 therefore, was composed of a large amount of academically unprepared students. This group also contained the highest percentage (nearly 70%) of students who stated that their intentions were to take selected courses (see p.-6). Likewise, group 8 students had the lowest percentage of students that stated that they intended to complete the associate degree. The students then, the majority of which needed remediation, did not intend to seek the associate degree. These students were therefore not required to enroll in an organized program of study where the placement exam would be required. The average credit hours earned for group 8 was 4.1, which was below the six hour criterion in which the placement tests are required. Therefore, there will be a smaller percentage in group 8 that took the exam than would be the case, for example in group 1, or other groups that averaged a larger amount of credit hours. Granted that this was the case, the finding that group 8 possessed much larger percentages of students below the cutoffs than did any of the other groups, still remains.

Groups 3 and 4 were interesting to compare in that they were the only two groups where students enrolled for two continuous semesters then dropped out. This is of interest because the proportion of students in these two groups were very different. Although both of these groups enrolled for two continuous semesters, group 3 demonstrated, and the effect was drastic, that the student's academic progress is seriously disrupted when they "stop out" one semester. It was a very small percentage of students that returned to college after they did not return for the third semester (3.1%). This same deleterious effect can be seen in group 5, where the stopping out occurs earlier in the students' academic career. When a student did not return for the second semester (spring 1988) there was a very small percentage (2.6%) of students that returned to complete two more semesters. Also, observe the percentages in groups 6 and 7, where the return and

nonreturn pattern is very disruptive to academic longevity, at 2.7% and 1.5% respectively. Of the entire first time freshmen population that began college work at MCC in the fall of 1987, 4.5% received a certificate or degree within a two year period. Those students that were continuously enrolled produced the largest percentage of graduates at 15.1%. These students also possessed the highest average GPA, and not surprisingly, the highest average credit hours earned.

TABLE 1 cont. General Characteristics of Subgroups

Stated Goals (Fall 1987)	All Groups Combined (2,994)	1 H,H,H,H (829)	2 H,H,H,X (258)	3 H,H,X,H (93)	4 H,H,X,X (687)	5 H,X,H,H (77)	6 H,X,H,X (82)	7 H,X,X,H (45)	8 H,X,X,X (923)
Complete Assoc.	37.3%	53.2%	42.2%	43.0%	32.2%	41.6%	35.4%	28.9%	25.0%
Complete Cert.	6.3%	6.8%	4.7%	5.4%	7.9%	1.3%	6.1%	8.9%	5.5%
Taking Selected Courses	56.4%	40.0%	53.1%	51.6%	59.8%	57.1%	58.5%	62.2%	69.4%
Transfer	42.1%	55.5%	48.8%	64.5%	40.5%	49.4%	40.2%	46.7%	26.5%
Improve Job Skills	27.2%	17.0%	21.7%	14.0%	27.5%	29.9%	26.8%	28.9%	38.6%

One of the more salient findings displayed in the first row of the above table, is the relationship between the number of semesters enrolled, and the percentages of students that intend to complete the associate degree. The four groups that enrolled for at least three semesters (1, 2, 3, 5) possessed the largest percentages of students who intended to complete the associate degree. Table 1a depicts this relationship.

TABLE 1a.

Group	Semesters Enrolled	Complete Associate
1	4	53.2%
2	3	42.2%
3	3	43.0%
5	3	41.6%

The enrollment persistence and percentages of intentions to complete the associate degree was a consistent finding for all eight groups. Table 1b reveals this relationship for the groups that enrolled for one and two semesters.

TABLE 1b.

Group	Semesters Enrolled	Complete Associate
4	2	32.3%
6	2	35.4%
7	2	28.9%
8	1	25.0%

To summarize, there was a relationship between stated intentions and academic persistence in terms of the number of semesters enrolled. The larger the percentage of students declaring that they intend to complete the associate degree, the greater the number of semesters they enrolled in.

Also, the four groups (1, 2, 3, 5) that enrolled for at least three semesters contained the largest percentages of students who stated that they intended to transfer. The range of percentages among the eight groups who intended to complete the certificate were from 1.3% (group 5) to 8.9% (group 7). These two groups possessed the smallest N's of any of the groups at 77 and 45 respectively, and when these two groups are not considered, the remaining six groups fall within a closer range of 4.7% to 7.9%. Therefore, these percentages do not appear to be too deviant from each other -- the groups did not show a great deal of difference from one another regarding intentions to complete a certificate. Groups 4 and 7 were composed of the largest percentages of students stating their intentions of completing a certificate, and these two groups enrolled for two semesters. As previously mentioned, group 7 was a very small group (N = 45), whereas group 4 contained 687 students. Although this was a large group which enrolled for two

consecutive semesters and contained essentially the largest percentage of students seeking a certificate, only 5 students actually received the certificate in a two year period.

When a student declares that he/she is at MCC to take selected courses, the probability increases that the student will be a non-continuously enrolled student. Nearly 70% of group 8 indicated that they would be taking selected courses. This group also included the lowest percentage of students who indicated that they had degree seeking intentions. This group had only 25.0% of its students indicate degree seeking intentions, whereas group 1 had over 53% of its students indicate this. Theoretically, the 640 students of group 8 (p.-6) who indicated that they only intended to take selected courses could have had their needs met in one semester (the fall 1987 semester) and would not have returned for the spring 1988 semester.

The needs of the students were being served regardless of whether a degree or certificate was granted. Of the groups that had nonreturning patterns, it was also found that they stated their intentions to improve job skills in larger percentages than the groups that enrolled for three and four semesters. This relationship is depicted in tables 1c and 1d.

TABLE 1c.

Group	Semesters Enrolled	Job Skills
1	4	17.0%
2	3	21.7%
3	3	14.0%
5	3	29.9%

TABLE 1d.

Group	Semesters Enrolled	Job Skills
4	2	27.5%
6	2	26.8%
7	2	28.9%
8	1	38.6%

Tables 1a through 1d demonstrate that it is very important to scrutinize student intentions as stated. These intentions appear to be reliable indicators of student outcomes. Graduation with a degree or certificate should not be considered the only criterion of success.

If all degree seeking students, certificate seeking students, and those students taking selected courses are included into one group, retention figures will be biased downward, or will appear lower than they actually are.

ACADEMIC INTENTIONS
SUB-GROUP ANALYSES

The following data represent the subgroup breakdown of the students that declared their intentions to transfer. When these students first enrolled in the fall of 1987, they indicated that they intended to transfer to a four-year institution. These students also indicated how they would accomplish their goal, by selecting from the three options of:

1) taking selected courses,
2) complete certificate,
3) complete associate degree.

Tables 2 and 3 display data from those students who indicated that they intended to be transfers, and were either seeking an associate degree, or taking selected courses. As expected, group 1 in table 2 (associate degree-transfer) had a larger percentage of students (42.7%) than did group 1 in table 3 at 29.6%. These findings tend to reify the accuracy of the students' statement of intent during the fall 1987 enrollment process.

If a student declares his/her intentions as a degree seeking transfer, then one would expect a large percentage of the group to be continuously enrolled (group 1, table 2). The underlying similarity of the students in tables 2 and 3 was the fact that both groups consisted of transfer students. With the exception of groups 1 and 4, the percentages in each of the groups were somewhat similar. The smaller percentage in group 4 of table 2 (18.4%) would be expected for the reason that few students could receive an associate degree in two semesters (compare group 4 in tables 1 and 2). In other words, there was a smaller percentage of degree seeking transfers that dropped out after two semesters than was the case for those students that intended to be transfers and were taking selected courses.

TABLE 2 Associate Degree/Transfer Subgrouping

Characteristics	All Groups Combined (663)	1 H,H,H,H (283)	2 H,H,H,X (66)	3 H,H,X,H (31)	4 H,H,X,X (122)	5 H,X,H,H (22)	6 H,X,H,X (15)	7 H,X,X,H (10)	8 H,X,X,X (114)
Percentage in Groups	100.0%	42.7%	10.0%	4.7%	18.4%	3.3%	2.3%	1.5%	17.2%
Female	55.7%	54.1%	48.5%	61.3%	54.1%	50.0%	66.7%	50.0%	64.0%
Average Age[a]	25.5	25.4	25.4	25.8	24.9	22.9	25.3	21.7	27.0
White	88.7%	90.8%	92.4%	74.2%	84.4%	90.9%	80.0%	90.0%	90.4%
Black	8.0%	5.7%	4.5%	19.4%	12.3%	4.5%	20.0%	10.0%	7.0%
Hispanic	1.7%	2.5%	3.0%	0%	0%	0%	0%	0%	1.8%
Avg. Cr. Hr. Earned	25.6	42.4	21.7	15.4	14.5	23.8	6.0	11.4	4.8
Average GPA	2.3	2.7	2.3	2.3	2.0	2.3	1.6	2.5	1.7
ASSET (Percentage[b] Below Cutoff)									
WS	11.4%	10.3%	13.0%	11.5%	12.5%	5.9%	9.1%	11.1%	13.5%
RS	25.3%	26.5%	22.2%	26.9%	25.0%	11.1%	27.3%	11.1%	28.8%
NS	50.4%	52.9%	54.5%	42.9%	47.9%	41.7	50.0%	10.0%	54.7%
Certificate/Degree Earned	6.9% (46)	15.5% (44)	1.5% (1)	0% (0)	0% (0)	4.5% (1)	0% (0)	0% (0)	0% (0)

[a] Average age in 1990.
[b] ASSET percentages based on a smaller sample.

TABLE 3 Selected Courses/Transfer Subgrouping

Characteristics	All Groups Combined (568)	1 H,H,H,H (168)	2 H,H,H,X (59)	3 H,H,X,H (28)	4 H,H,X,X (147)	5 H,X,H,H (16)	6 H,X,H,X (16)	7 H,X,X,H (10)	8 H,X,X,X (124)
Percentage in Groups	100.0%	29.6%	10.4%	4.9%	25.9%	2.8%	2.8%	1.8%	21.8%
Female	48.9%	53.6%	45.8%	46.4%	46.3%	50.0%	43.8%	60.0%	47.6%
Average Age[a]	23.0	22.5	22.8	22.1	23.3	22.6	21.4	23.0	23.8
White	85.6%	89.3%	91.5%	82.1%	83.0%	75.0%	75.0%	90.0%	83.9%
Black	10.9%	8.9%	6.8%	14.3%	12.9%	18.8%	25.0%	10.0%	9.7%
Hispanic	1.2%	0%	0%	3.6%	2.0%	0%	0%	0%	2.4%
Avg. Cr. Hr. Earned	21.5	41.2	20.1	19.1	16.3	20.6	8.6	7.8	4.9
Average GPA	2.1	2.4	1.9	2.0	2.1	2.1	1.3	2.0	1.6
ASSET (Percentage[b] Below Cutoff)									
WS	11.3%	12.9%	12.2%	21.7%	9.6%	15.4%	6.7%	0%	13.1%
RS	26.4%	27.2%	24.5%	26.1%	27.2%	46.2%	6.7%	0%	27.7%
NS	47.9%	43.9%	44.4%	50.0%	48.2%	60.0%	42.9%	20.0%	56.5%
Certificate/Degree Earned	3.3% (19)	10.7% (18)	0% (0)	3.6% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)

[a] Average age in 1990.
[b] ASSET percentages based on a smaller sample.

Females were overrepresented in group 8 of table 2. Fifty-six percent of the students that declared themselves to be degree seeking transfers in table 2 were females, yet group 8 contained 64%. Forty-nine percent of the group that intended to transfer and were taking selected courses were female (Table 3). As just stated, only 48.9% of this group was female (table 3, first column), yet 55.7% of those students who indicated that they would transfer and were degree seeking, were female. Also, of the entire group of first time freshmen (table 1), 57.6% of those students were female. Therefore, the typical male-female ratio of students did not hold for the transfer student taking selected courses. This data indicates that there was a larger proportion of males present (Table 3) than is usually the case. At least at the beginning of the students' academic career at MCC, there were disproportionately less females who stated that they intended to transfer, while only taking selected courses at MCC.

A result that becomes immediately apparent when comparing tables 2 and 3 was the age differential of the students of these two subgroupings. The degree seeking transfer students averaged 2 1/2 years older than those students taking selected courses who intended to transfer. The average age of the student was higher for the degree seeking transfers in seven of the eight groups. These data indicate, then, that as the student increases in age, their level of commitment toward higher education also increases.

As was demonstrated by the data in table 1, the black students were also disproportionately represented (that is underrepresented) in groups 1 and 2 of tables 2 and 3. Groups 1 and 2 as you recall, contained students that were continuously enrolled for four and three semesters respectively. Black students seem to be at risk for not completing continuous enrollment more so than whites. The third semester appears to be the pivotal point for the black students as is depicted in group 3 of tables 2 and 3. The enrollment pattern of group 3 was to enroll for two continuous semesters, not return

for the fall 1988 semester, and then return for the spring 1989 semester. There were not that many students in this group, but the proportion of blacks was larger than would be expected, given the proportion of blacks in the "all groups combined" column. This was a consistent finding for all three of the tables presented thus far in the analysis. The following table displays this subset of data from tables 1, 2, and 3.

Table 4 Comparison of Combined Groups with Group 3 for Black Students

	All Groups Combined	Group 3
From table 1:	12.2%	21.5%
From table 2:	8.0%	19.4%
From table 3:	10.9%	14.3%

Black students represent 12.2% of the entire population, whereas group 3 contained 21.5%. The results reported in table 1 included all students, and did not provide subgroupings based on the response options on page 10. As previously stated, tables 2 and 3 present the subgroup breakdowns of students seeking an associate degree or taking selected courses who intended to transfer. When examining table 4 however, it can be seen that the black students were also disproportionately represented when an "all group" vs. group 3 comparison was made from the data in tables 2 and 3.

SIXTEEN GROUP ANALYSIS

The eight group design was extended to include the fall 1989 semester. These eight groups were subdivided into returning and nonreturning groups to produce a 16 group design. The results are presented in table 5 for certain variables.

TABLE 5 Select Academic Variables of the 16 Subgroups

Characteristics	All Groups Combined (2994)	1 H,H,H,H,H (489)	2 H,H,H,H,X (340)	3 H,H,H,X,H (55)	4 H,H,H,X,X (203)	5 H,H,X,H,H (31)	6 H,H,X,H,X (62)	7 H,H,X,X,H (64)
Percentage in Groups	100.0%	16.3%	11.4%	1.8%	6.8%	1.0%	2.1%	2.1%
Avg. Cr. Hrs. Earned	19.1	45.9	44.2	24.4	21.2	27.6	15.2	19.2
Avg. GPA	2.4	2.7	2.7	2.3	2.3	2.6	2.2	2.5
Cert./Degree Earned	5.7% (172)	10.8% (53)	31.5% (107)	0.0% (0)	2.0% (4)	0.0% (0)	1.6% (1)	0.0% (0)

8 H,H,X,X,X (623)	9 H,X,H,H,H (39)	10 H,X,H,H,X (38)	11 H,X,H,X,H (15)	12 H,X,H,X,X (67)	13 H,X,X,H,H (12)	14 H,X,X,H,X (33)	15 H,X,X,X,H (63)	16 H,X,X,X,X (860)
20.8%	1.3%	1.3%	.5%	2.2%	.4%	1.1%	2.1%	28.7%
13.5	30.5	16.9	15.6	6.2	13.8	7.8	8.5	4.1
2.4	2.5	2.3	2.5	1.9	2.2	2.2	2.3	2.2
.8% (5)	2.6% (1)	2.6% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)

When group 1 from the eight group design was divided into returning and nonreturning groups of the fall 1989 semester, groups 1 and 2 were created. This process was completed for all eight groups, with the eighth group from the original analysis now becoming groups 15 and 16.

Of the original group of 2994 first time freshmen, 16.3% or 489 remained continuously enrolled for five consecutive semesters. Group 7 contained 64 students who returned for the fall 1989 semester after missing two consecutive semesters. This group was part of the 687 students in group 4 of the eight group design. Group 15 contained 63 students who missed three consecutive semesters, yet returned for the fall 1989 semester.

The highest GPA was 2.7, and this was achieved by groups 1 and 2, the two groups with the largest amount of continuous enrollment. There were eight groups that missed the second semester, and with the exception of group 16, groups 12 and 15 were the two largest, and were very similar in size, yet group 12 possessed the lowest GPA of the two at 1.9. This group produced the lowest GPA in the entire analysis.

There was a 1.2% (36 additional certificates or degrees) increase in the number of degree recipients when the fall semester was included. Thirty-five of these 36 came from the breakdown of group 1. Only 1 more degree recipient was gained from the other 14 groups. The breakdown of group 5 into groups 9 and 10 produced this additional recipient.

ERIC CLEARINGHOUSE FOR
JUNIOR COLLEGES

NOV 30 1990